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EXAMINER	
WILLIAMS, JEFFERY A	

ART UNIT	PAPER NUMBER
2488	

NOTIFICATION DATE	DELIVERY MODE
04/10/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/591,447	ERA, KAZUNARI	
	Examiner	Art Unit	
	JEFFERY WILLIAMS	2482	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-20* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-20* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection.

2. On pages 13-14 of the applicant's remarks, the applicant argues that the prior art Kubon (5,682,030) fails to teach the limitation of claim "an embedding unit operable to embed bar-code image data in each of the plurality of pieces of sequentially correlated video image data.

The examiner respectfully disagrees. In col. 2, lns. 61-63 and col. 12, lns. 14-21, Kubon discloses video signals which have embedded barcodes. Although Kubon is directed toward the decoding of these embedded barcodes, the barcodes have been embedded in the video signal by some means of barcode embedding device.

3. On page 14 of the applicant's remarks, the applicant argues that the "depth" information, which is embedded in to a barcode, referred to by the prior art Ogami (6, 102,295) refers to depth of color, and not the depth of view, as claimed in claim 4 (sterescopic parameters).

The examiner respectfully disagrees. In col. 5, lns. 55-57, Ogami teaches that the encoded elements can be a number of "common measurable characteristics". It is well known in the art to measure the depth (depth of view) of a pixel. Ogami makes reference to other characteristics such as the width, length, area, and geometry. While Ogami does not explicitly state the depth is related to the color or depth of view, it is not unreasonable to interpret the "depth" as relating to a depth of view, which is a "common measurable characteristic".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim rejected under 35 U.S.C. 103(a) as being unpatentable over Moura et al. (Moura) (US 6,760,488) in view of Harman (US 2002/0118275).

Regarding **claim 1**, Moura discloses a non-transitory computer readable medium (col. 5, lns. 9-13) comprising:

a plurality of sequentially correlated pieces of video image data to be processed sequentially (ABSTRACT; col. 5, lns. 14-15); and

stereoscopic parameters for converting a video image into a stereoscopic image, each of which is associated with each of the plurality of pieces of sequentially correlated video image data (FIG. 4, (32); col.12, lns. 23-36; depth information).

While Moura does not explicitly disclose the stereoscopic image has a disparity between left and right eye images that creates a perception of depth, it is well known in the art that a 3d image is generated by viewing an object from different view points (e.g. from the left and right sides of the image), and using the disparity between the two views to generate an image which has depth (a 3d image).

This method of creating a 3d image is further supported by Harman. Harman discloses creating a stereoscopic image from a 2d image in which the 2d image is

viewed from the left and right side, the two views used to create a 3d image (FIGs. 1 and 3, [0015], [0039]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Harman into the teachings of Moura because the method of generating a 3d image is by exploiting the disparity between an object viewed from 2 or more points of view to create an object which has a sense of depth.

Moura from the same or similar field of endeavor discloses

Regarding **claim 2**, the limitations of claim 2 are rejected in the analysis of claim 1 and claim 2 is rejected on that basis.

Moura further discloses a non-transitory computer readable medium (ABSTRACT; col. 5, lns. 9-13) comprising:

a plurality of pieces of sequentially correlated video image data to be processed sequentially (col. 5, lns. 14-15); and

sub-picture data to be combined with each of the plurality of pieces sequentially correlated video image data, wherein the sub-picture data contains stereoscopic parameters for converting a video image into a stereoscopic image (col 14, lns. 44-55; col. 21, lns. 55-57; sub picture data is defined as pixel locations and colors).

Regarding **claim 3**, Moura discloses the non-transitory computer readable medium according to claim 1 (see claim 1 above), further embedded with a program (col. 5, lns. 4-5) for causing a computer to execute a stereoscopic imaging process effecting the stereoscopic parameters on the sequentially correlated video image data (col. 4, lns. 36-41).

6. Claims 4-8 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moura et al. (Moura) (US 6,760,488) in view of Kubon (US Pat. No. 5,682,030) and further in view of Ogami (US Pat. No. 6,102,295) .

Regarding **claims 4 and 5**, Moura discloses a stereoscopic parameter embedding apparatus comprising:

a video image input unit operable to input a plurality of pieces of sequentially correlated video image data to be processed sequentially (see claim 1above);

a parameter input unit operable to input stereoscopic parameters for converting a video image into a stereoscopic image, each parameter being associated respectively with each of the plurality of pieces sequentially correlated video image data (see claim 1 above).

Moura is silent about a converter operable to convert each of the input stereoscopic parameters into binary data and an embedding unit operable to embed bar-code image data corresponding to the binary data in each of the plurality of pieces of sequentially correlated video image data.

Kubon from the same or similar field of endeavor discloses a converter operable to convert parameters of a video (col. 5, lns. 1-2) into binary data (col. 9, lns. 43-49; a high voltage represents a binary "1" and a low voltage represents a binary "0), and an embedding unit operable to embed bar code data image data corresponding to the binary data in each of the plurality of sequentially correlated video image data (FIG. 4;

barcode digitizer; FIG. 7, col. 2, lns. 61-63, col. 12, lns. 14-21; the barcode signal has been embedded in the video signal by a barcode embedding means).

It would have been obvious to one of ordinary skill in the art at the time of the invention to convert the stereoscopic parameters of a 2D image into binary for efficient sequential tracking of the parameters and video data

Ogami from the same or similar field of endeavor discloses embedding sub picture data such as hue or color and depth or intensity into a barcode (col.5, lns. 54-60).

It would have been obvious to one of ordinary skill in the art at the time of the invention to convert the stereoscopic parameters of a 2D image into binary, convert the binary data into a bar code, and embed the barcode in to the video signal of the parameters, when converting a 2D video sequence to 3D for efficient sequential tracking of the parameters and video data.

Regarding **claim 6**, the limitations of claim 6 are rejected in the analysis of claims 4 and 5, and claim 6 is rejected on that basis.

Regarding **claim 7**, the limitations of claim 7 are rejected in the analysis of claims 1and 3-5 and the limitations of claim 7 are rejected on that basis. Moura further discloses a non-transitory computer readable medium embedded with a program for 3D scene generation (col. 5, lns. 10-13) an a display (col. 4, lns. 27-30; a typical computer system contains a display).

Regarding **claims 8, and 13-15**, the limitations of claims 8, and 13-15 are rejected in the analysis of claims 1-6 and claim 8 is rejected on that basis.

Regarding **claim 11**, the limitations of claim 11 are rejected in the analysis of claims 1-4 and claim 11 is rejected on that basis.

Regarding **claim 12**, the limitations of claim 12 are rejected in the analysis of claims 1-5 and claim 12 is rejected on that basis.

Regarding **claim 16**, the limitations of claim 16 are rejected in the analysis of claim 1 and claim 16 is rejected on that basis.

Regarding **claims 17 and 19**, the limitations of claims 17 and 19 are rejected in the analysis of claim 5 and claims 17 and 19 are rejected on that basis.

Regarding **claims 18 and 20**, the limitations of claims 18 and 20 are rejected in the analysis of claim 7 and claims 18 and 20 are rejected on that basis.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moura et al. (Moura) (US 6,760,488) in view of Kubon (US Pat. No. 5,682,030) in view of Ogami (US Pat. No. 6,102,295) and further in view of Isao (JP 2002-123842).

Regarding **claim 9**, Moura in view or Kubon in view of Ogami discloses the stereoscopic reproduces according to claim 8 (see claim 8 above).

Moura in view or Kubon in view of Ogami is silent about a bar-code eraser operable to alter the sub-picture data to erase the bar-code image data after the bar-code data is analyzed and the stereoscopic parameters are extracted from the bar-code image data.

Isao from the same or similar field of endeavor discloses a bar-code eraser operable to alter the sub-picture data to erase the bar-code image data after the bar-

code data is analyzed and the stereoscopic parameters are extracted from the bar-code image data (see [0043]; depth value modification processing) and [0045] and [0047]; last sentence), wherein the combiner combines the video image data with the altered sub- picture data (see [0043], [0044] and [0046], the "depth value modification section" changes the values of the sub picture data in accordance with the changes made by the "depth value alteration program").

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a bar code eraser which can alter the bar code associated with the sub picture data of a 2D image used to generate a stereoscopic image to account for changes and errors in the sub picture data.

Regarding **claim 10**, Moura in view or Kubon in view of Ogami discloses the stereoscopic reproduces according to claim 8 (see claim 8 above).

Moura in view or Kubon in view of Ogami is silent about a reproduction system switcher operable to switch between reproduction of video image data for stereoscopic viewing and reproduction of video image data not for stereoscopic viewing, wherein the combiner, if reproduction of video image data for stereoscopic viewing is selected by the reproduction system switcher, combines the stereoscopic- process-applied video image data with the sub-picture data, and if reproduction of video image data not for stereoscopic viewing is selected by the reproduction system switcher, combines the pre-stereoscopic process video image data with the sub-picture data.

Isao from the same or similar field of endeavor discloses a reproduction system switcher operable to switch between reproduction of video image data for stereoscopic

viewing and reproduction of video image data not for stereoscopic viewing, wherein the combiner, if reproduction of video image data for stereoscopic viewing is selected by the reproduction system switcher, combines the stereoscopic- process-applied video image data with the sub-picture data, and if reproduction of video image data not for stereoscopic viewing is selected by the reproduction system switcher, combines the pre-stereoscopic process video image data with the sub-picture data. (see pg. 7, [0035] and [0036]; CPU2 performs various processing on the input data and the output is chosen by a user by the use of a mouse or keyboard. The chosen output type, ie. 2D image data, edit data, 3D image data, etc., is then output to a CRT. The user can function as the "switch system switcher" which decides whether or not the stereographic image reproducer will produce a 3D image).

It would have been obvious to one of ordinary skill in the art at the time of the invention to allow the stereoscopic reproduction system disclosed by Moura to be able to switch between reproducing 2D and 3D images, as disclosed by Isao, to allow viewing of the 2D data stream when a 3D playback device is not present.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFERY WILLIAMS whose telephone number is (571)270-7579. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571)272-7331. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEFFERY WILLIAMS/
Examiner, Art Unit 2482

/CHRISTOPHER S KELLEY/

Supervisory Patent Examiner, Art Unit 2482